Anchor Setting Facts

- The first ten anchors will be placed at the Canal beginning in **May**. The second ten anchors will arrive for installation in June. Anchor setting operations will be completed by **September**.
- Anchor setting will start on the north side of the bridge and work from the shore to the middle of the canal. The crew will then move to the south side of the bridge and move from the middle of the canal to the shore.
- It takes about **two days** to place **one** anchor.
- A tug boat will be move **one** anchor at a time from their mooring location in Port Gamble Bay to the Canal.
- **Two** derrick barges (DB) will be used during the operations- one to conduct a clearance survey and place ballast rock and one for anchor setting.
- The DB Pacific, which will set each of the anchors, can hold a load of **2,000** tons (or **111** school buses at one time) thanks to a custom truss section fabricated by Jesse Engineering in Tacoma.
- A controlled descent operation will lower the anchors to the bottom of the Canal. The anchors will be held by **four** clamps, with **four** cables each.
- A **video camera** attached to a chain will monitor anchor placement and **global positioning systems** will track the exact location of each anchor.
- **17,000 tons** of crushed rock will be used to ballast, or weigh down, all of the anchors once they are at the bottom of the Canal.
- The buoyant weight of the anchors (in the water) ranges from **582** to **1,762** tons.
- On land, each anchor weighs about **1,000** tons, equivalent to about **167** male African elephants.
- There are **three** sizes of anchors:
  - **Twelve** anchors are **46** feet in diameter
  - **Seven** anchors are **56** feet in diameter
  - **One** anchor is **60** feet in diameter
- The two cycles of anchors were constructed in **four and a half** months each, for a total of **nine** months for anchor construction.
- **64,400 feet** (more than **12 miles**) of anchor cable will be installed in **2009** to connect the anchors to the new east-half pontoons.

East-half Replacement and West-half Retrofit Project

Start Date: August 2002

Completion Date: 2010

Project Budget: $471 million

Major Work Items:

- Replace the east-half floating portion of the bridge
- Replace the east and west approach spans
- Replace the east and west transition spans
- Widen the west-half to allow for continuous eight-foot shoulders across the entire length of the bridge -- matching the new east-half
- Upgrade electrical systems on the west-half

Historical Facts:

- Construction began January 1958 and was opened to traffic on August 12, 1961.
- Original bridge construction cost $26.6 million.
- The bridge was named in honor of William A. Bugge. Bugge was director of the Department of Highways from 1949 to 1963, and was a leader in the planning and construction of the bridge.
- The pontoons for the floating bridge were constructed at a graving dock along the Duwamish River in Seattle and towed by tugs to the bridge site.
- The bridge's west half failed and sank on February 13, 1979 during a storm carrying wind gusts of 120 mph and sustained winds of 85 miles per hour. The west half re-opened in October 1982.
- Replacement of the west half and rehabilitation of the east half cost $143 million.
- Average daily traffic across Hood Canal Bridge is approximately 14,000 vehicles. Peak volumes reach 20,000 vehicles on summer weekends.
- The water depth below the floating bridge pontoons ranges from 80 to 340 feet. In its marine environment, the bridge is exposed to tide swings of 16.5 feet.
- During inclement weather, when winds of 40 mph or more are sustained for 15 minutes, the draw span is retracted (closing the bridge to vehicle traffic).

Theresa Gren, Communication Manager ♦ (253) 305-6428 ♦ grent@wsdot.wa.gov ♦ Summer 2007